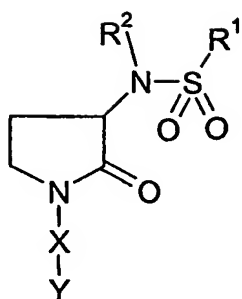


Claims

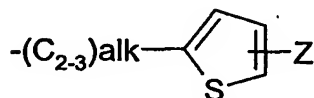
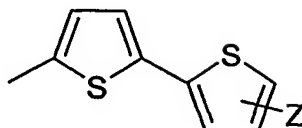
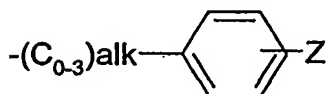
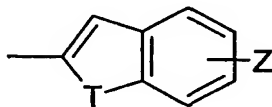
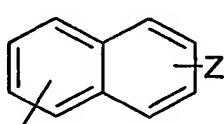
1. A compound of formula (I):



(I)

wherein:

R¹ represents a group selected from:



each ring of which optionally contains a further heteroatom N,

Z represents an optional substituent halogen,

alk represents alkylene or alkenylene,

T represents S, O or NH;

R² represents -C₁₋₆alkyl, -C₁₋₃alkylCN, -C₀₋₃alkylRᶜ, -C₁₋₃alkylRᶠ, -C₂₋₃alkylNRᵃRᵇ, -C₂₋₃alkylOC₁₋₆alkyl, -C₂₋₃alkylOC₁₋₃alkylCONRᵃRᵇ, with the proviso that R² does not represent C₂₋₃alkylmorpholino;

Rᵃ and Rᵇ independently represent hydrogen, -C₁₋₆alkyl, or together with the N atom to which they are bonded form a 5-, 6- or 7- membered non-aromatic heterocyclic ring

optionally containing an additional heteroatom selected from O, N or S, optionally substituted by  $-C_{1-4}alkyl$ , and optionally the S heteroatom is substituted by O i.e. represents  $S(O)_n$ ;

$R^c$  represents  $-C_{3-6}cycloalkyl$ ;

$R^f$  represents phenyl or a 5- or 6- membered aromatic heterocyclic ring, containing at least one heteroatom selected from O, N or S, optionally substituted by 0 to 2 groups selected from  $-C_{1-4}alkyl$  or  $-NH_2$ , and optionally the S or N heteroatom is substituted by O, i.e. represents  $S(O)_n$  or N-oxide;

n represents 0-2;

X represents phenyl or a 5- or 6- membered aromatic heterocyclic group containing at least one heteroatom selected from O, N or S, each of which is optionally substituted by 0-2 groups selected from: halogen,  $-C_{1-4}alkyl$ ,  $-C_{2-4}alkenyl$ ,  $-CN$ ,  $-CF_3$ ,  $-NR^aR^b$ ,  $-C_{0-4}alkylOR^e$ ,  $-C(O)R^d$  and  $-C(O)NR^aR^b$ ;

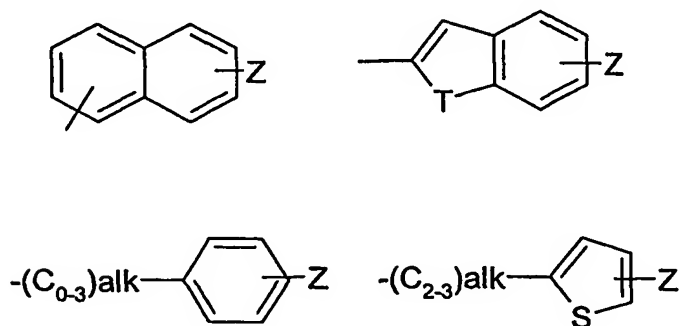
$R^e$  represents hydrogen or  $-C_{1-6}alkyl$ ;

Y represents a substituent selected from hydrogen, halogen,  $-C_{1-4}alkyl$ ,  $-C_{2-4}alkenyl$ ,  $-NR^aR^b$ ,  $-NO_2$ ,  $-C(O)NR^aR^b$ ,  $-N(C_{1-4}alkyl)(CHO)$ ,  $-NHCOC_{1-4}alkyl$ ,  $-NHCO_2R^d$ ,  $-C_{0-4}alkylOR^e$ ,  $-C(O)R^d$ ,  $-S(O)_nR^d$ , or  $-S(O)_2NR^aR^b$ ;

$R^d$  represents  $-C_{1-6}alkyl$ ;

and/or pharmaceutically acceptable derivative thereof.

2. A compound according to claim 1 wherein  $R^1$  represents a group selected from:



each ring of which optionally contains a further heteroatom N,  
 Z represents an optional substituent halogen,  
 alk represents alkylene or alkenylene,  
 T represents S, O or NH.  
 and/or pharmaceutically acceptable derivative thereof.

3. A compound according to claim 1 or claim 2 wherein  $R^2$  represents  $-C_{1-6}alkyl$ ,  $-C_{0-3}alkylR^c$ ,  $C_{1-3}alkylR^f$ ,  $-C_{2-3}alkylNR^aR^b$ ,  $-C_{2-3}alkylOC_{1-6}alkyl$ ,  $-C_{2-3}alkylOC_{1-3}alkylCONR^aR^b$  and/or pharmaceutically acceptable derivative thereof.

4. A compound according to any one of claims 1-3 wherein X represents phenyl or a 5 or 6 membered aromatic heterocyclic group containing at least one heteroatom selected from O, N or S, each of which is optionally substituted by 0-2 groups selected from: halogen,  $-C_{1-4}alkyl$  or  $-NR^aR^b$ .

5. A compound according to any one of claims 1-4 wherein Y represents a substituent selected from  $-C(O)NR^aR^b$ ,  $-S(O)_nR^d$ ,  $-S(O)_2NR^aR^b$ ,  $-N(C_{1-4}alkyl)(CHO)$  or  $-NHSO_2R^d$  and/or pharmaceutically acceptable derivative thereof.

6. A compound according to claim 1 selected from:

- 4-((3S)-3-(((1E)-2-(5-Chloro-2-thienyl)-1-propen-1-yl)sulfonyl)(cyclopropylmethyl)amino)-2-oxo-1-pyrrolidinyl]-3-fluoro-N,N-dimethylbenzamide;
- 4-((3S)-3-(((1E)-2-(5-Chloro-2-thienyl)-1-propen-1-yl)sulfonyl)[3-(dimethylamino)propyl]amino)-2-oxo-1-pyrrolidinyl]-3-fluoro-N,N-dimethylbenzamide;
- 4-((3S)-3-(((1E)-2-(5-Chloro-2-thienyl)-1-propen-1-yl)sulfonyl)[2-(dimethylamino)ethyl]amino)-2-oxo-1-pyrrolidinyl]-3-fluoro-N,N-dimethylbenzamide;
- 4-[(3S)-3-((2-[(2-Amino-2-oxoethyl)oxy]ethyl)[(1E)-2-(5-chloro-2-thienyl)-1-propen-1-yl)sulfonyl]amino)-2-oxo-1-pyrrolidinyl]-3-fluoro-N,N-dimethylbenzamide;
- 4-((3S)-3-(((1E)-2-(5-Chloro-2-thienyl)-1-propen-1-yl)sulfonyl)(cyclopentyl)amino)-2-oxo-1-pyrrolidinyl]-3-fluoro-N,N-dimethylbenzamide;
- 4-((3S)-3-(((1E)-2-(5-Chloro-2-thienyl)-1-propen-1-yl)sulfonyl)[(1-methyl-1H-imidazol-2-yl)methyl]amino)-2-oxo-1-pyrrolidinyl]-3-fluoro-N,N-dimethylbenzamide;
- 4-((3S)-3-(((1E)-2-(5-Chloro-2-thienyl)-1-propen-1-yl)sulfonyl)(1-methylethyl)amino)-2-oxo-1-pyrrolidinyl]-3-fluoro-N,N-dimethylbenzamide;
- 4-((3S)-3-(((1E)-2-(5-Chloro-2-thienyl)-1-propen-1-yl)sulfonyl)(2-pyridinylmethyl)amino)-2-oxo-1-pyrrolidinyl]-3-fluoro-N,N-dimethylbenzamide;
- 4-((3S)-3-(((1E)-2-(5-Chloro-2-thienyl)-1-propen-1-yl)sulfonyl)[(3,5-dimethyl-4-isoxazolyl)methyl]amino)-2-oxo-1-pyrrolidinyl]-3-fluoro-N,N-dimethylbenzamide;

4-((3S)-3-(((1E)-2-(5-Chloro-2-thienyl)-1-propen-1-yl)sulfonyl)[2-(methyloxy)ethyl]amino)-2-oxo-1-pyrrolidinyl]-3-fluoro-*N,N*-dimethylbenzamide;  
 4-((3S)-3-(((1E)-2-(5-Chloro-2-thienyl)-1-propen-1-yl)sulfonyl){2-[(1,1-dimethylethyl)oxy]ethyl]amino)-2-oxo-1-pyrrolidinyl]-3-fluoro-*N,N*-dimethylbenzamide;  
 4-((3S)-3-[(3-Amino-2-pyrazinyl)methyl](((1E)-2-(5-chloro-2-thienyl)-1-propen-1-yl)sulfonyl)amino)-2-oxo-1-pyrrolidinyl]-3-fluoro-*N,N*-dimethylbenzamide;  
 4-((3S)-3-(((1E)-2-(5-Chloro-2-thienyl)-1-propen-1-yl)sulfonyl)(methyl)amino)-2-oxo-1-pyrrolidinyl]-3-fluoro-*N,N*-dimethylbenzamide;  
 4-((3S)-3-(((E)-2-(5-chloro-2-thienyl)ethenyl)sulfonyl)(methyl)amino)-2-oxo-1-pyrrolidinyl]-3-fluoro-*N,N*-dimethylbenzamide;  
 and/or pharmaceutically acceptable derivative thereof.

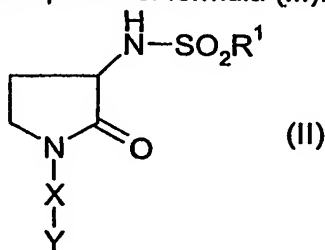
7. A compound according to any one of claims 1-6 and/or pharmaceutically acceptable derivative thereof for use in therapy.

8. A pharmaceutical composition comprising a compound according to any one of claims 1-6 and/or pharmaceutically acceptable derivative thereof together with at least one pharmaceutical carrier and/or excipient.

9. Use of a compound according to any one of claims 1-6 and/or pharmaceutically acceptable derivative thereof for the manufacture of a medicament for the treatment of a patient suffering from a condition susceptible to amelioration by a Factor Xa inhibitor.

10. A method of treating a patient suffering from a condition susceptible to amelioration by a Factor Xa inhibitor comprising administering a therapeutically effective amount of a compound according to any one of claims 1-6 and/or pharmaceutically acceptable derivative thereof.

11. A process for preparing a compound of formula (I) which comprises reacting a compound of formula (II) with a compound of formula (III):



where  $R^2$  is  $-C_{1-6}\text{alkyl}$ ,  $-C_{1-3}\text{alkylCN}$ ,  $-C_{0-3}\text{alkylR}^c$ ,  $-C_{1-3}\text{alkylR}^f$ ,  $-C_{2-3}\text{alkylINR}^aR^b$ ,  $-C_{2-3}\text{alkylOC}_{1-6}\text{alkyl}$ ,  $-C_{2-3}\text{alkylOC}_{1-3}\text{alkylCONR}^aR^b$ , with the proviso that  $R^2$  does not represent  $C_{2-3}\text{alkylmorpholino}$ , and T is a suitable leaving group.